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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yoon-Seob Eom

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EXAMINER

ALI, MOHAMMAD M

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,576	Applicant(s) EOM ET AL.	
	Examiner MOHAMMAD M. ALI	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,9-20 and 27-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,9-20 and 27-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
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| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 9-20 and 27-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copp (US 3,309,889) in view of Thomaschew (DE2649016 A). Copp discloses a window type air conditioner comprising

A case of which one side (38) is positioned at an outdoor side and another side (28) is positioned at an indoor side; an axial fan (62) mounted in the case, for blowing air in a radius direction thereof; an outdoor heat exchanger (70) for heat-exchanging outdoor air blown by the axial fan; and a shroud (64) having the outdoor heat exchanger therein, for guiding the air blown by the axial fan (62), wherein an inclination surface is formed at an edge (See the inclination surface two ends of the fan blades of fan 62) in

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order to smoothly flow air introduced in a radius direction. See Fig 2, column 1, line 63 to column 2, line 57. Copp discloses the invention substantially as claimed as stated above except triangular surface as first surface and after the triangular first surface is the second surface (1, 6); the first surface (triangular surface) having a predetermined number of sides greater than four (see 6 sides of the shroud contains six triangles as shown 3 in the 50% of the shroud), a first number planes allowing air that extend from respective ones of a first plurality of sides of the first surface at one or more first angles, the first number of planes allowing air to smoothly flow when introduced in the radius direction, and second number of planes that extend from respective ones of a second plurality of sides of the first surface at one or more second angles, wherein the first number of planes have a same first geometrical (triangular) shape and the second number of planes have a same second geometrical (rectangular 1 and 6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the fan housing of air conditioning system of Copp in view of Thomaschew such that a triangular surface as a first surface exceeding number 4 and rectangular surface as second surface could be provided in order to have a stronger structural feature and efficient air flow guide.

Regarding claims 1 and 34, the above combined disclosure of Copp and Thomaschew disclose the limitations of claims 1 and 34.

Regarding claim 2, orifice is mouth of the shroud in which the fan (62) and fan motor (66) is disposed.

Regarding claim 3, the orifice is on the front surface of the shroud (64) through which air is being sucked, after the bent air guide surface at the front mouth of the shroud (64), the horizontal lateral surface can be seen.

Regarding claims 4 and 7, the front guide surface and the lateral surface make a curve.

Regarding claim 9, Thomaschew discloses points (10) forming corners of the fan shroud at which four sides meet together. (See Fig. 3b).

Regarding claim 10, Thomaschew discloses that a number of additional surfaces 1, 3c, 7 between triangular surfaces, the four additional surfaces having four sides. (See Fig. 3b).

Regarding claim 11, the triangular and other four-sided surfaces forms eight or more corresponding flow paths; the triangular and surfaces has no substantial right angles. (See Fig. 3c).

Regarding claim 12, the additional surfaces 1, 3c, 7 of Thomaschew have trapezoidal shape. (See Fig. 3b).

Regarding claim 13, triangular surfaces of Thomaschew is no of right angle triangular shape. (See Fig. 3b).

Regarding claim 14, Thomaschew disclose hexagonal shape by triangular position portions (5) and (11) as shown in Fig. 3b. Therefore, an ordinary skill of art knowing the technique of making a fan shroud of hexagonal surface obviously able to make an octagonal surface of fan shroud.

Regarding claim 15, Thomaschew discloses that the triangular planes has three pints and wherein the first point extends towards the lateral surface of the shroud and the second and third points extend toward the front surface of the shroud. See Fig. 3b.

Regarding claim 16, Thomaschew discloses that the first point contacts the lateral surface of the shroud and the second and third points contact the front surface of the shroud. See Fig. 3b.

Regarding claim 17, the triangular planes are at acute angles relative to lateral surfaces of the shroud. See the portions 5 and 11 of Fig. 3b.

Regarding claim 18, Thomaschew discloses that the triangular planes are inclined at substantially a same acute angle relative to lateral surfaces of the shroud. See Fig. 3b.

Regarding claim 19, the triangular planes (5, 11, 10) lie in planes different from a front surfaces or lateral surfaces as shown in Fig. 3b.

Regarding claim 20, Thomaschew discloses that the triangular planes are arranged diagonally relative to the front and lateral surfaces of the shroud. See Fig. 3b.

Regarding claim 27, Thomaschew discloses that the first geometrical shape being of triangular shape has a different number of sides having 3 sides than the second geometrical shape being rectangular shape having 4 sides..

Regarding claim 28, Thomaschew discloses that the first number of planes and the second number of planes are disposed in an alternating arrangement relative to the first surface of the shroud. See Fig. 3b of Thomaschew.

Regarding claim 29, Thomaschew discloses that points of the first number of planes are disposed between respective sides of the second number of planes in said alternating arrangement. See Fig 3b of Thomaschew.

Regarding claim 30, Thomaschew discloses that the first number of (triangular planes) planes and the second number of planes (rectangular planes) join to form a rectangular peripheral edge of the shroud that is spaced from the first surface of the shroud by a predetermined distance. See Fig. 3b.

Regarding claim 31, Thomaschew discloses that the predetermined distance corresponds to a distance between a first edge and an opposing first point of at least one of the first number of planes. See Fig. 3b.

Regarding claims 32, Thomaschew discloses that the predetermined distance corresponds to a distance between a first edge and an opposing second edge of at least one of the second number of planes. See Fig. 3b.

Regarding claim 33, Thomaschew discloses that the one or more first angles are different from the one or more second angles. See Fig. 3b of Thomaschew.

Regarding claim 35, Thomaschew discloses that the first geometrical shape has a different number of sides (s3 sides) than the second geometrical shape (having 4 sides).

Regarding claim 36, Thomaschew discloses that the first number of planes and the second number of planes are disposed in an alternating arrangement relative to the first surface of the shroud. See Fig 3b.

Regarding claim 37, Thomaschew discloses that points of the first number of planes are disposed between respective sides of the second number of planes in said alternating arrangement. See Fig. 3b.

Regarding claim 38, Thomaschew discloses that the first number of planes and the second number of planes join to form a rectangular peripheral edge of the shroud that is spaced from the first surface of the shroud by a predetermined distance. See Fig. 3b.

Regarding claim 39, Thomaschew discloses that the predetermined distance corresponds to a distance between a first edge and an opposing first point of at least one of the first number of planes. See Fig. 3b.

Regarding claim 40, Thomaschew discloses that the predetermined distance corresponds to a distance between a first edge and an opposing second edge of at least one of the second number of planes. See Fig. 3b.

Regarding claim 41, Thomaschew discloses that the one or more first angles are different from the one or more second angles. See Fig.

Regarding claim 42, Thomaschew discloses that the first geometrical shape is a triangular shape. See Fig. 3b.

Response to Arguments

Applicant's arguments with respect to claim 1-4, 920 and 27-42 have been considered but are moot in view of the new ground(s) of rejection as explained above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD M. ALI whose telephone number is (571)272-4806. The examiner can normally be reached on maxiflex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4808. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mohammad M Ali/
Primary Examiner, Art Unit 3744